

IN THE SPECIFICATION:

Please amend paragraph 0011 of the "DETAILED DESCRIPTION OF THE INVENTION" section of the Specification as follows:

FIG. 1 illustrates a schematic of an exemplary power circuit used in a locomotive, e.g., a dual mode locomotive. That is, a locomotive that is able to operate in an electrical mode or in an internal combustion mode, e.g., a traction alternator 11 is coupled to receive mechanical power from an internal combustion engine (not shown) to generate electrical power onboard the locomotive after appropriate conversion to DC power in a power rectifier bridge 32. It will be appreciated that the techniques of the present invention are not limited to locomotives, much less dual mode locomotives, since such techniques may be readily used in any vehicle that includes an electrically-powered propulsion system.

Please amend paragraph 0012 of the "DETAILED DESCRIPTION OF THE INVENTION" section of the Specification as follows:

As shown in FIG. 1, in the electrical mode, a plurality of shoes 12 allows to receive electrical power from an external power source, represented by a power rail 14. As further shown in FIG. 1, a plurality of power devices, such as SCRs or thyristors 15, is coupled in parallel circuit to a power line filter including reactor devices such as a bank of capacitors represented by capacitor 18 and an inductor 19. As will be readily understood by one of ordinary skill in the art, SCRs are used extensively in power electronics circuits. SCRs are three terminal devices generally operated as bistable switches, operating from nonconducting state to conducting state in response to a gating signal. Once the SCR conducts, it behaves like a conducting diode and there is no gating control over the device. See Chapter 4 of textbook titled "Power Electronics --Circuits Devices and Applications--" by Muhammad H. Rashid 2nd Ed. 1993, published by Prentice-Hall, Inc., for readers who desire further background information regarding the operation of SCR power devices. The power line filter is used to

filter power line voltage supplied to the propulsion system to remove electrical transients and noise that could degrade the performance of the propulsion system. Power line filter capacitor 18 generally charges to line voltage upon transitioning into the power rail mode. The charging of the line filter capacitor is generally controlled by a rail filter charge contactor circuit 20 (RFCC) in response to control signals from a controller 22 to avoid potentially detrimental large power surges when the power rail engages one or more of the shoes 12. The RFCC 20 may comprise a resistive load 34 in circuit with power line filter 18 through one or more switches 36 in a manner well understood by those skilled in the art. In one aspect of the present invention, a method for detecting electrical faulty conditions in the plurality of power devices 15 is provided. In its broadest aspect, the method comprises a first sequence of actions for determining an electrical short condition in at least one of the power devices (e.g., SCRs 15) upon the power source (e.g., power rail 14) being connected. The method further comprises a second sequence of actions for determining an electrical open condition in a respective one of the plurality of power devices during the occurrence of high current events.